

SUPPLEMENTARY MATERIAL

COVID-19 Moral Disengagement and Prevention Behaviors: The Impact of Workplace COVID-19 Safety Climate and Employee Job Insecurity

This supplementary material is meant to help researchers in establishing the convergence of the Bayesian estimation presented in Table 3. We added a short description of what researchers should be looking for when evaluating the information presented below. Please note that for brevity's sake, we only report the graphs for the five parameters for which we had a hypothesis. Other graphs can be requested from the first author.

List of Acronyms/Abbreviations

PSR = Potential Scale Reduction

MCMC = Markov Chain Monte Carlo

JI = Job Insecurity (variable)

CLIM = Perceptions of COVID-19 Safety Climate (variable)

INT = JI*CLIM Interaction Term (variable)

MDS = COVID-19 Moral Disengagement (variable)

BEH_W = Enactment of CDC-Recommended Behaviors at Work (variable)

BEH_NW = Enactment of CDC-Recommended Behaviors outside Work (variable)

What to look for

Table S1: The PSR should be stable and close to 1.00 for most iterations. Usually, “close” is defined as $\text{PSR} < 1.05$ (Gelman et al., 2013).

Figures S1-S5: Trace plots should show “convergence” (Depaoli & Van de Schoot, 2017, p. 247). This means that graphs should show stable mean and variance across the iterations, that is, they should be visually stacked.

Figures S6-S10: Posterior histograms should look smooth and do not show any gaps or abnormalities.

Figures S11-S15: Autocorrelation plots should show low levels of autocorrelations. In fact, high chain autocorrelations could be indicative of issues with the MCMC sampling algorithm or the model.

Figures S16-S20: Posterior distribution’s Kernel density plots should be examined to detect substantive abnormalities. The plot should be smooth, make substantive theoretical sense, show a posterior SD smaller than the original parameter’s scale, show that the credible interval range is smaller than the original parameter’s scale, and show a relatively stable variance of the posterior (Depaoli & Van de Schoot, 2017, p. 252).

Table S1

Model's PSR for each 100th iteration (after burn-in only)

Iteration	PSR	Parameter with highest PSR	3300	1.013	23	6800	1.007	9
100	1.171	6	3400	1.018	23	6900	1.008	9
200	1.103	23	3500	1.022	23	7000	1.008	9
300	1.244	24	3600	1.015	23	7100	1.005	23
400	1.358	9	3700	1.011	23	7200	1.008	23
500	1.575	9	3800	1.011	23	7300	1.007	23
600	1.446	9	3900	1.011	23	7400	1.007	23
700	1.103	9	4000	1.01	24	7500	1.008	23
800	1.004	8	4100	1.011	24	7600	1.01	23
900	1.042	9	4200	1.011	23	7700	1.008	23
1000	1.007	9	4300	1.014	23	7800	1.008	23
1100	1.022	9	4400	1.013	23	7900	1.008	23
1200	1.039	9	4500	1.011	23	8000	1.008	23
1300	1.079	9	4600	1.008	23	8100	1.009	23
1400	1.079	9	4700	1.007	23	8200	1.01	24
1500	1.036	9	4800	1.007	23	8300	1.011	24
1600	1.013	9	4900	1.008	23	8400	1.013	24
1700	1.007	20	5000	1.012	23	8500	1.013	24
1800	1.006	23	5100	1.012	23	8600	1.012	24
1900	1.006	23	5200	1.013	23	8700	1.011	24
2000	1.007	22	5300	1.012	23	8800	1.012	24
2100	1.005	22	5400	1.012	23	8900	1.013	24
2200	1.011	9	5500	1.013	23	9000	1.014	24
2300	1.007	23	5600	1.011	23	9100	1.013	24
2400	1.009	23	5700	1.012	23	9200	1.013	24
2500	1.014	17	5800	1.011	23	9300	1.012	24
2600	1.013	17	5900	1.013	23	9400	1.01	24
2700	1.015	23	6000	1.017	23	9500	1.009	24
2800	1.019	9	6100	1.012	23	9600	1.008	24
2900	1.013	9	6200	1.011	23	9700	1.007	24
3000	1.008	20	6300	1.009	23	9800	1.006	24
3100	1.014	20	6400	1.009	23	9900	1.004	24
3200	1.012	20	6500	1.009	23	10000	1.004	24
			6600	1.008	23			
			6700	1.007	23			

Figure S1

MCMC Trace Plot ($JI \rightarrow MDS$)

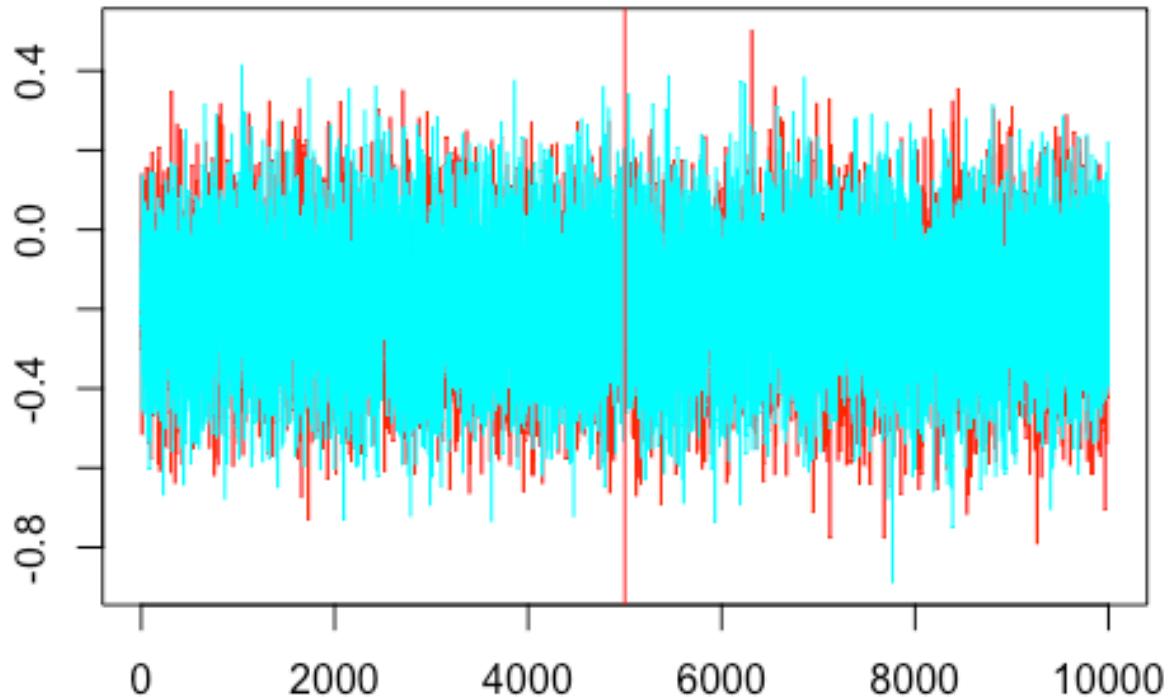


Figure S2

MCMC Trace Plot (CLIM → MDS)

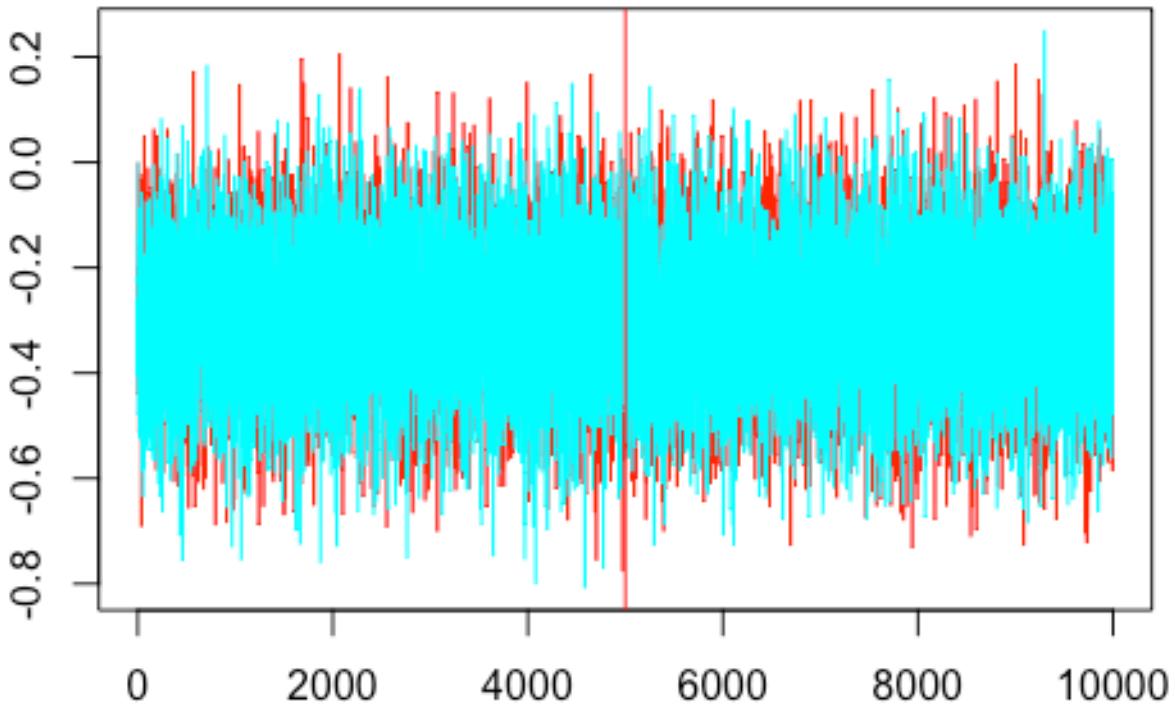


Figure S3

MCMC Trace Plot (INT → MDS)

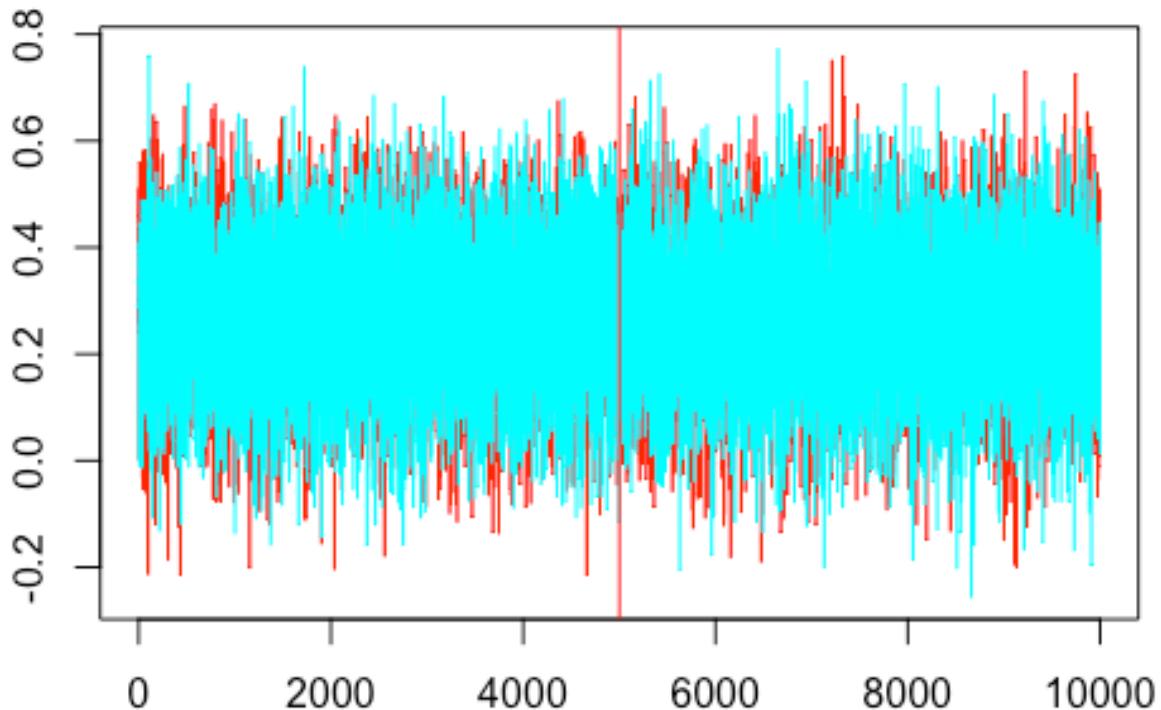


Figure S4

MCMC Trace Plot ($MDS \rightarrow BEH_W$)

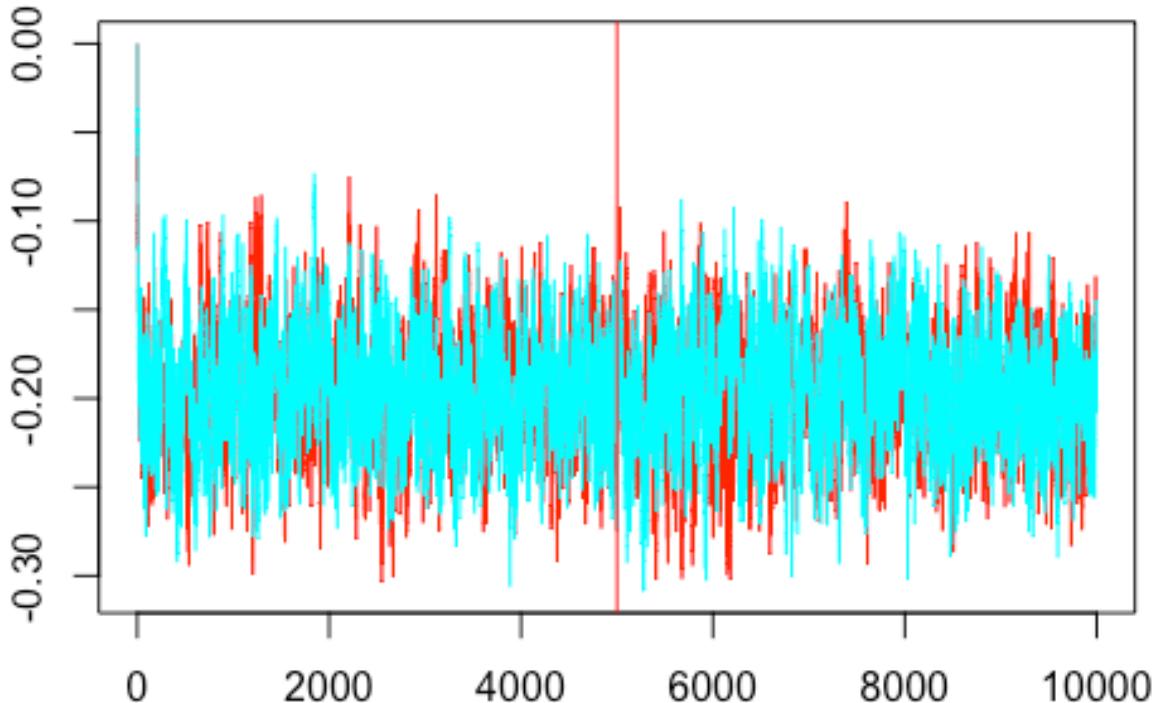


Figure S5

MCMC Trace Plot ($MDS \rightarrow BEH_NW$)

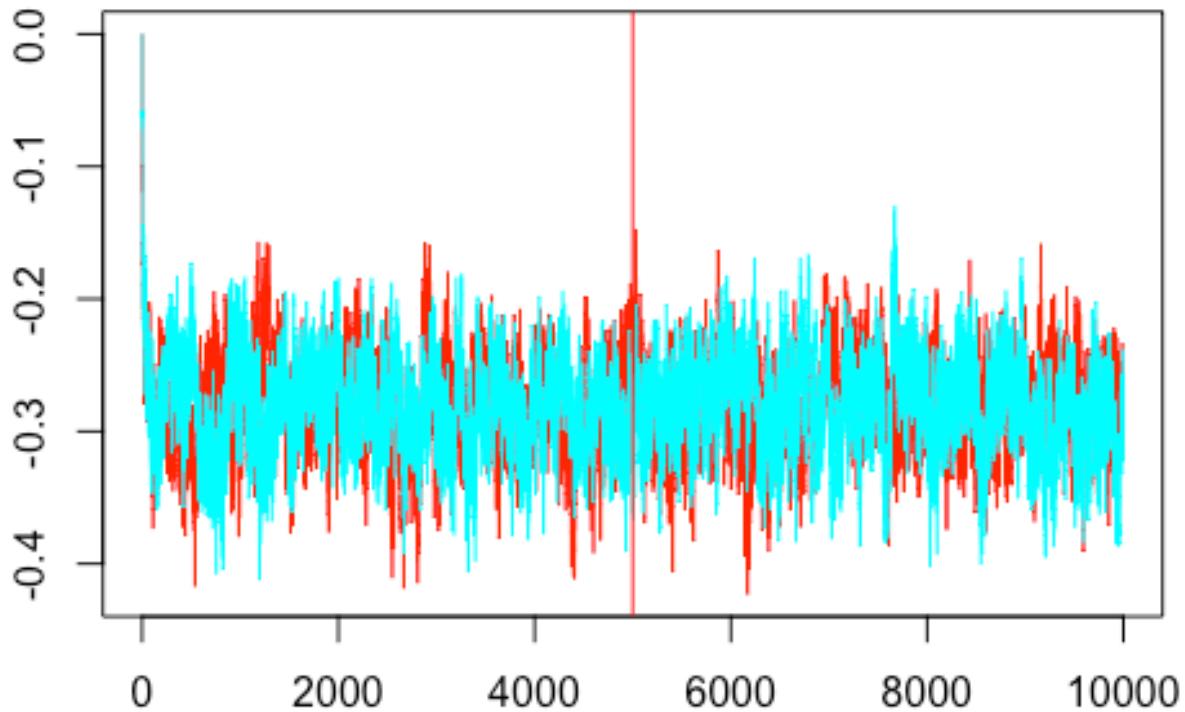


Figure S6

Posterior Histogram ($JI \rightarrow MDS$)

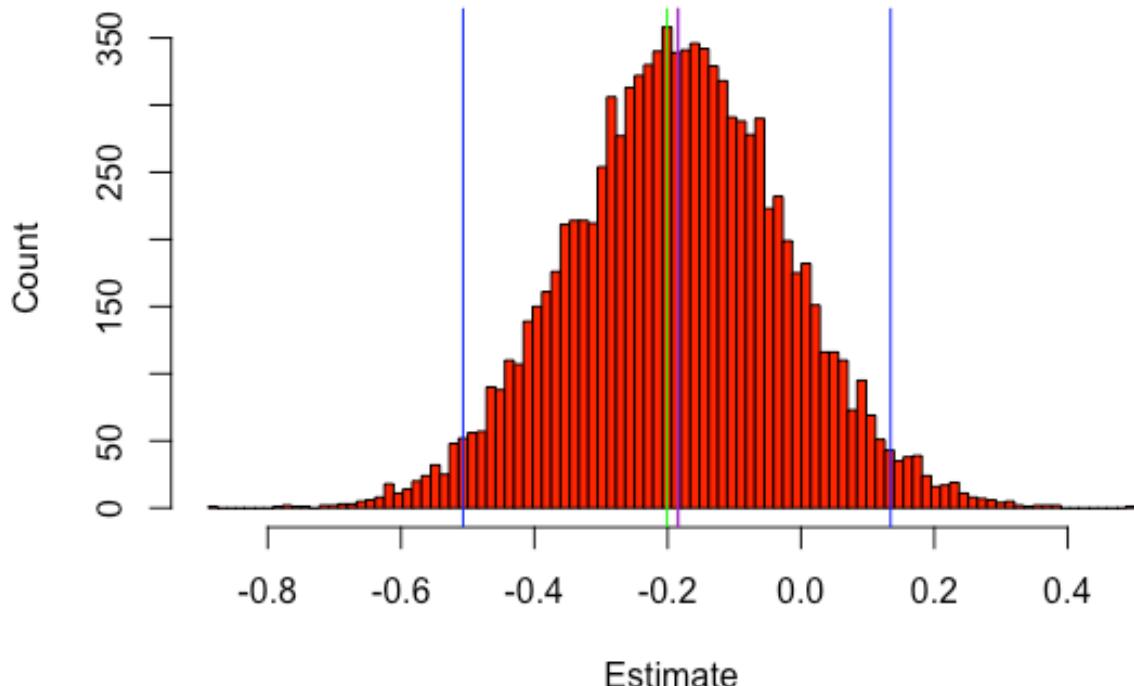


Figure S7

Posterior Histogram (CLIM → MDS)

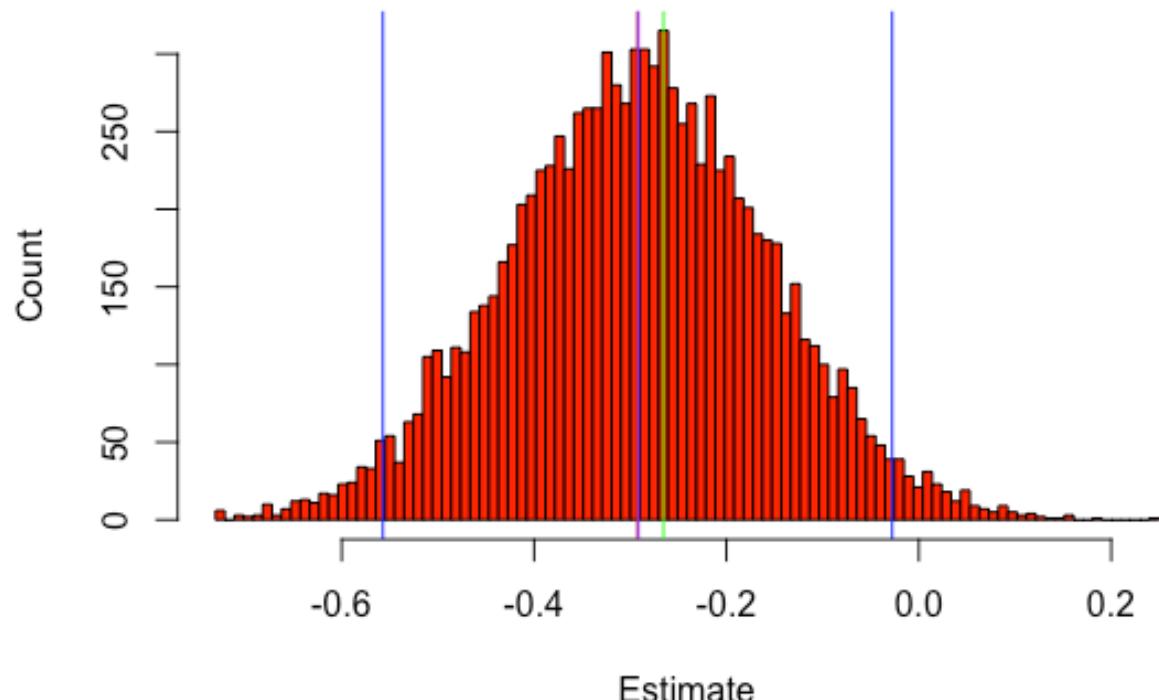


Figure S8

Posterior Histogram (INT → MDS)

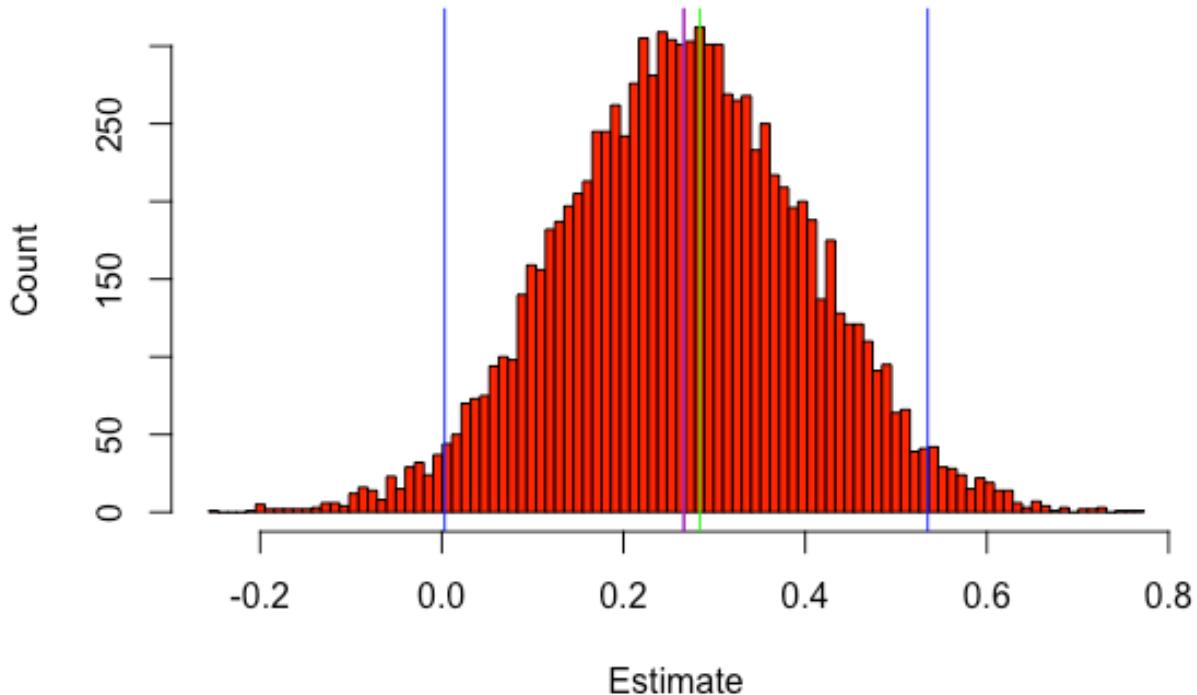


Figure S9

Posterior Histogram ($MDS \rightarrow BEH_W$)

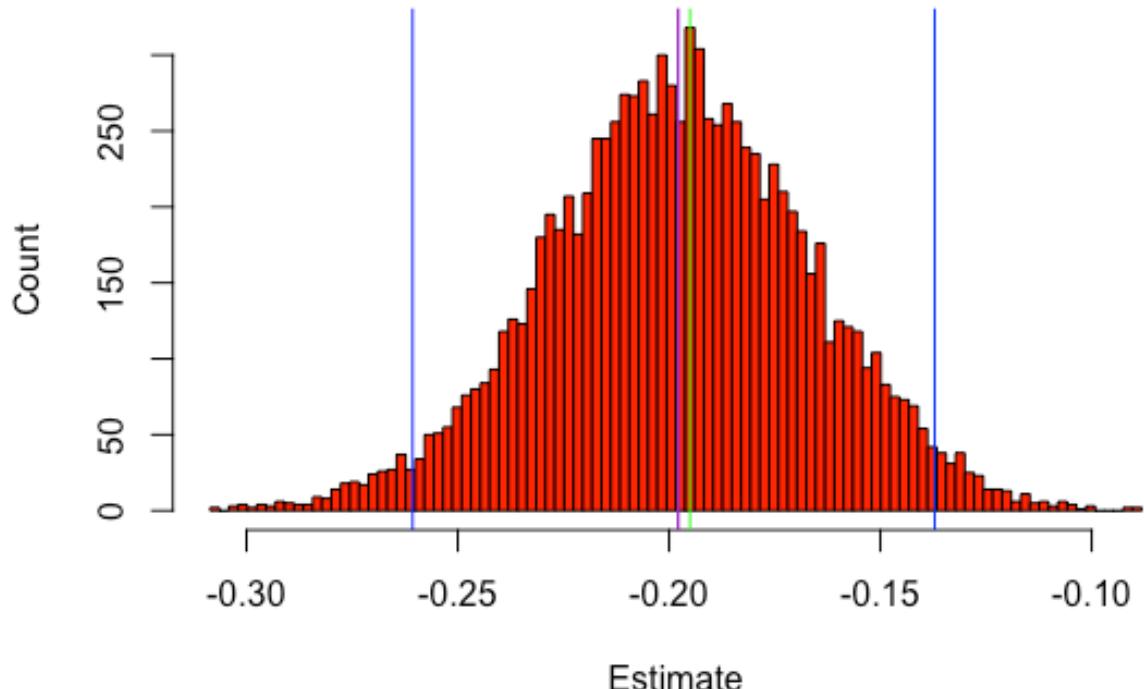


Figure S10

Posterior Histogram ($MDS \rightarrow BEH_NW$)

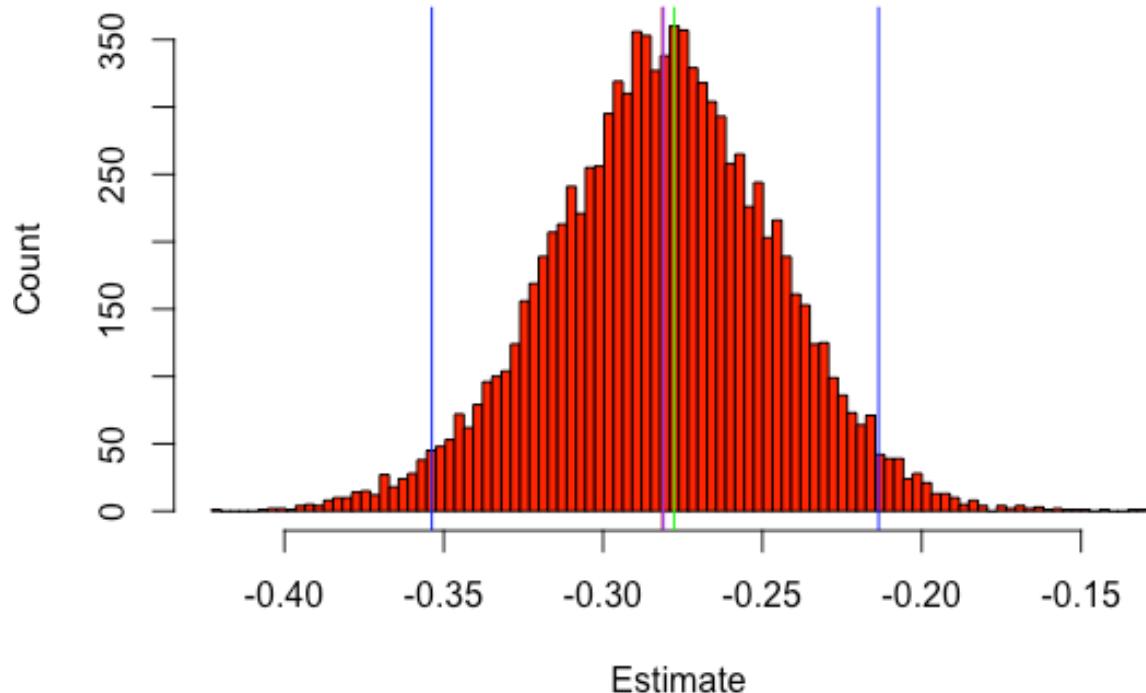


Figure S11

Chains Autocorrelations ($J_1 \rightarrow MDS$)

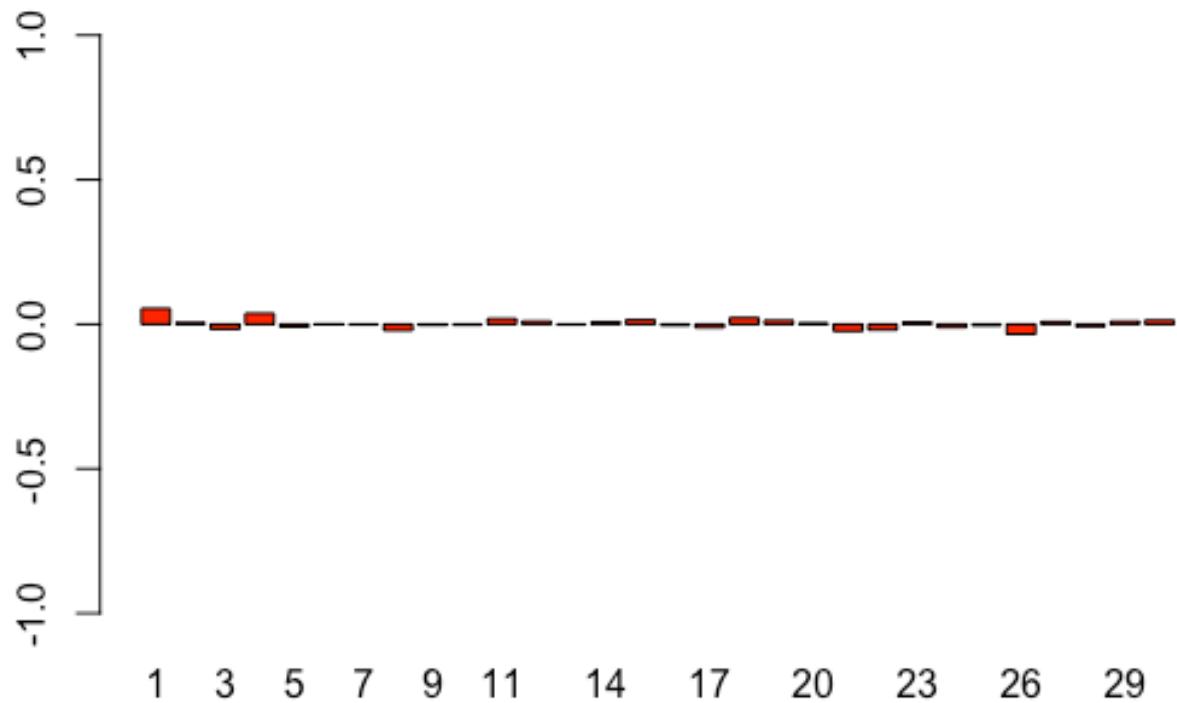


Figure S12

Chains Autocorrelations (CLIM → MDS)

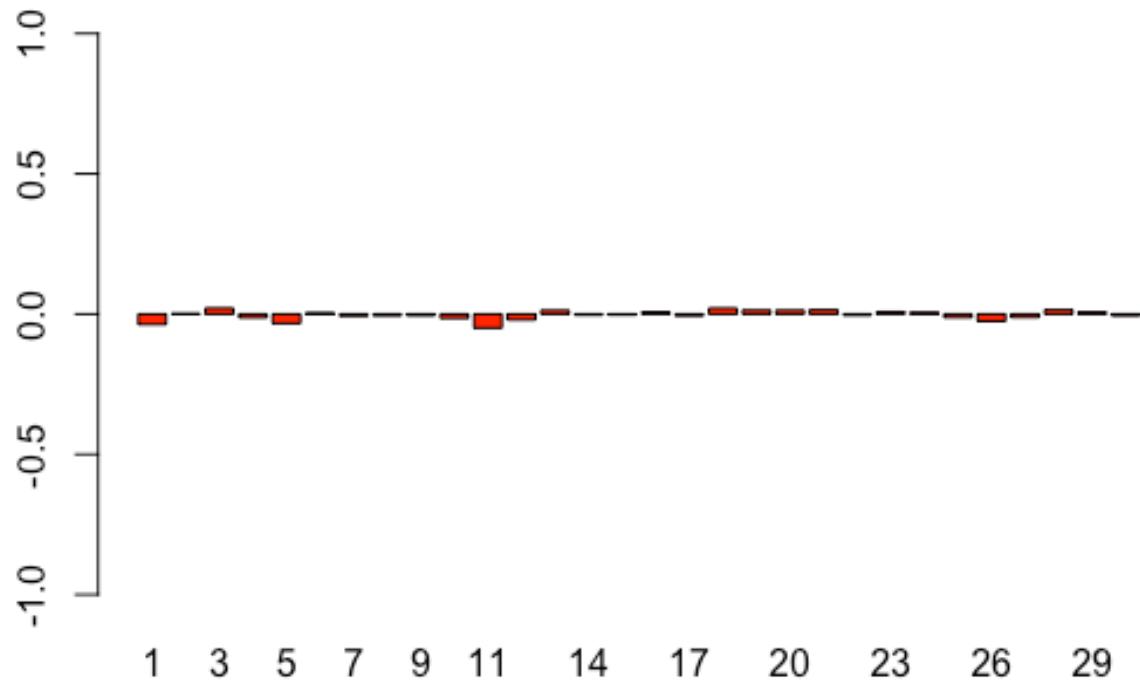


Figure S13

Chains Autocorrelations (INT → MDS)

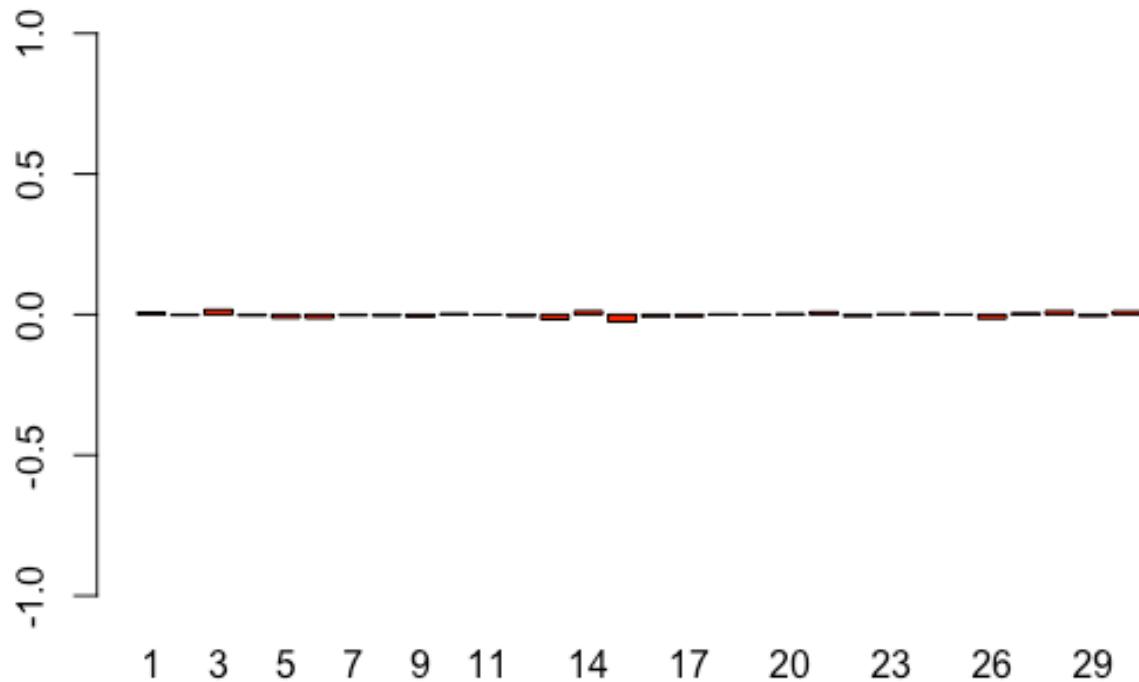
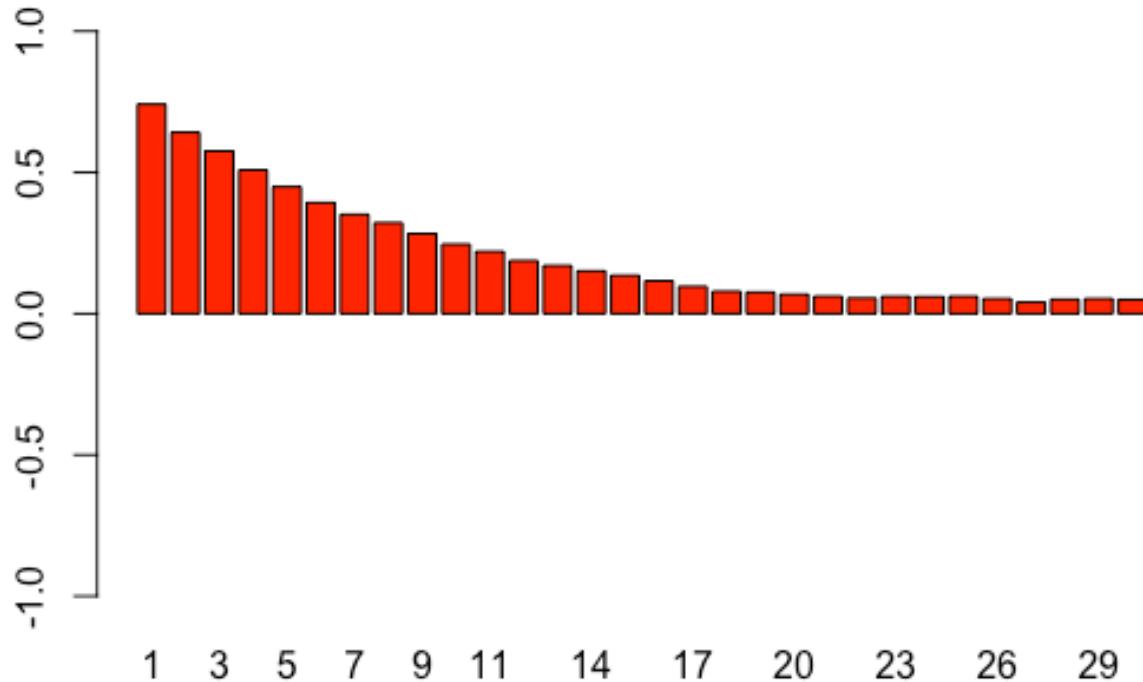


Figure S14

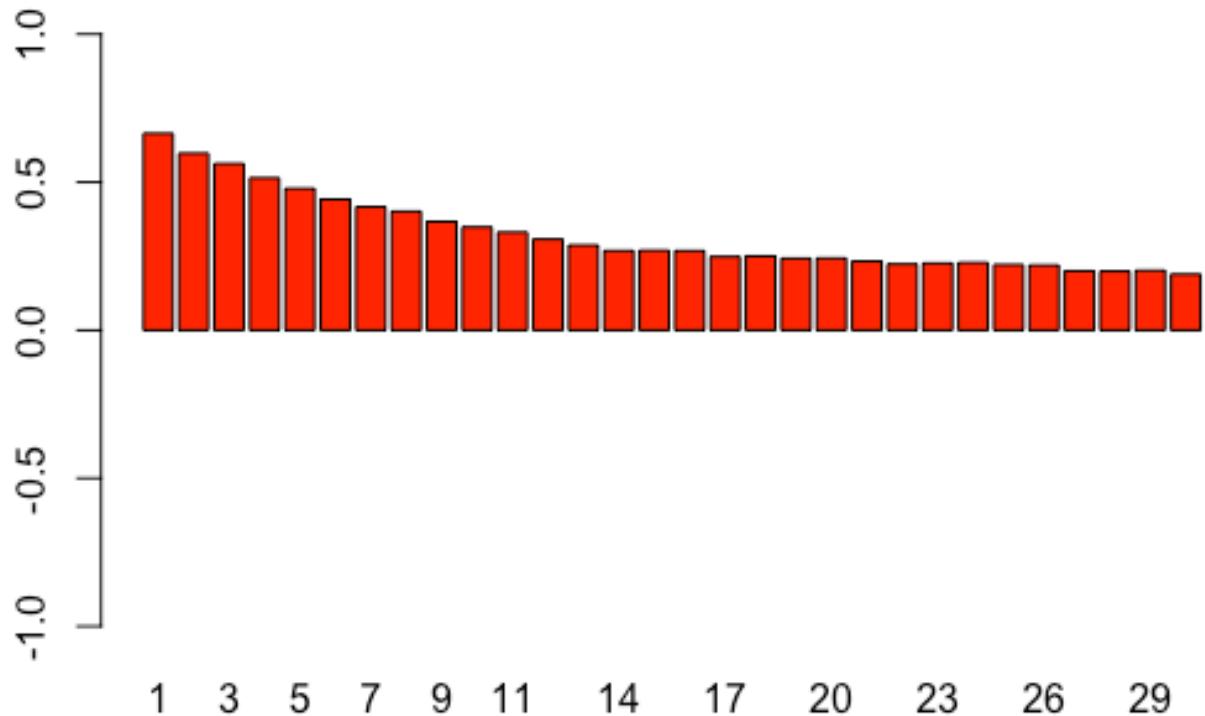
Chains Autocorrelations ($MDS \rightarrow BEH_W$)



Note: This graph looks rather different compared to the previous three. In fact, the degree of autocorrelation seems higher at the beginning of the chain and then gradually decreases towards zero. Following Depaoli and Van de Schoot (2017), we do not believe that the autocorrelation shown above is overly excessive and this graph poses serious issues for the interpretation of this parameter because convergence was achieved.

Figure S15

Chains Autocorrelations (MDS → BEH_NW)



Note: This graph looks rather different compared to the first three but similar to the fourth. In fact, the degree of autocorrelation seems higher at the beginning of the chain and then gradually decreases towards zero. Following Depaoli and Van de Schoot (2017), we do not believe that the autocorrelation shown above is overly excessive and this graph poses serious issues for the interpretation of this parameter because convergence was achieved.

Figure S16

Posterior Distribution's Kernel Density Plot ($JI \rightarrow MDS$)

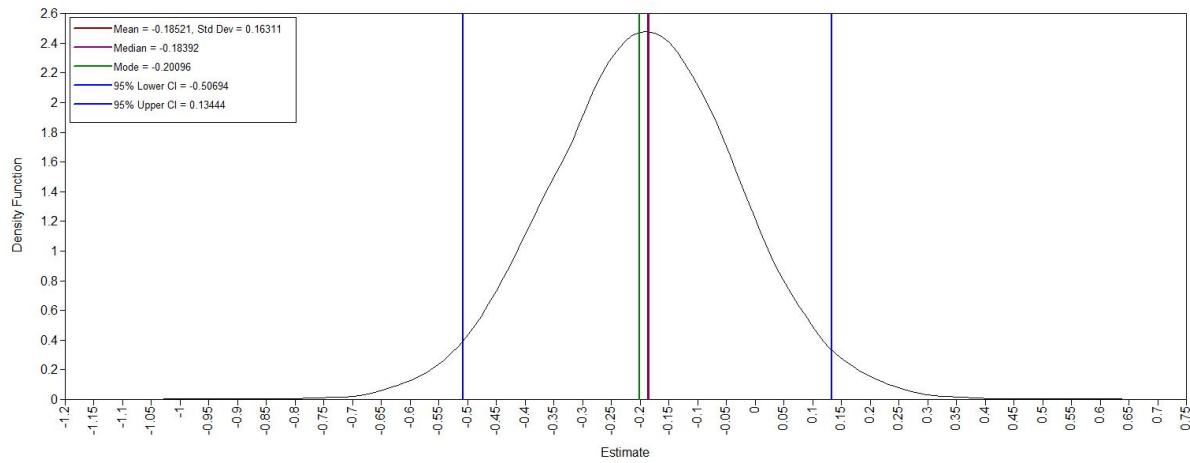


Figure S17

Posterior Distribution's Kernel Density Plot (CLIM → MDS)

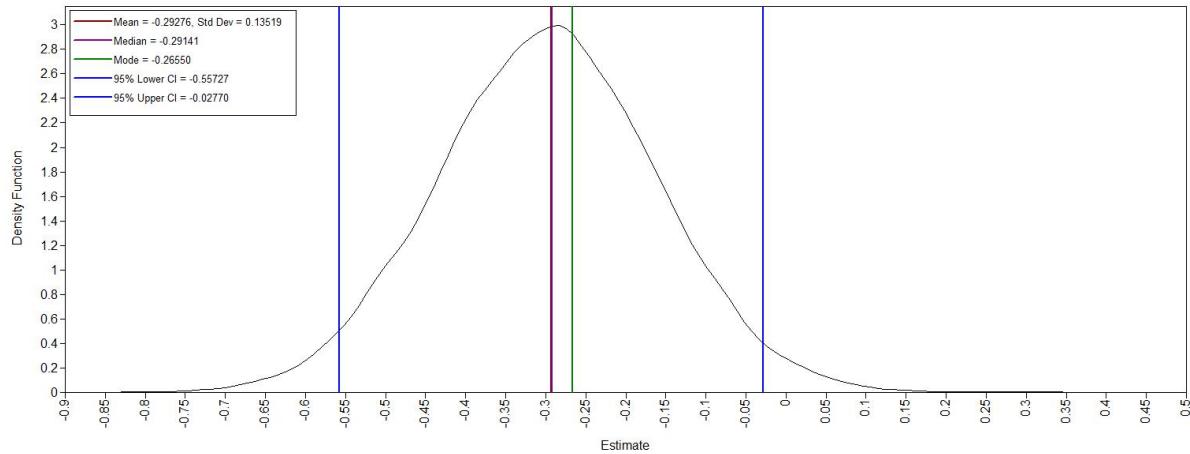


Figure S18

Posterior Distribution's Kernel Density Plot (INT → MDS)

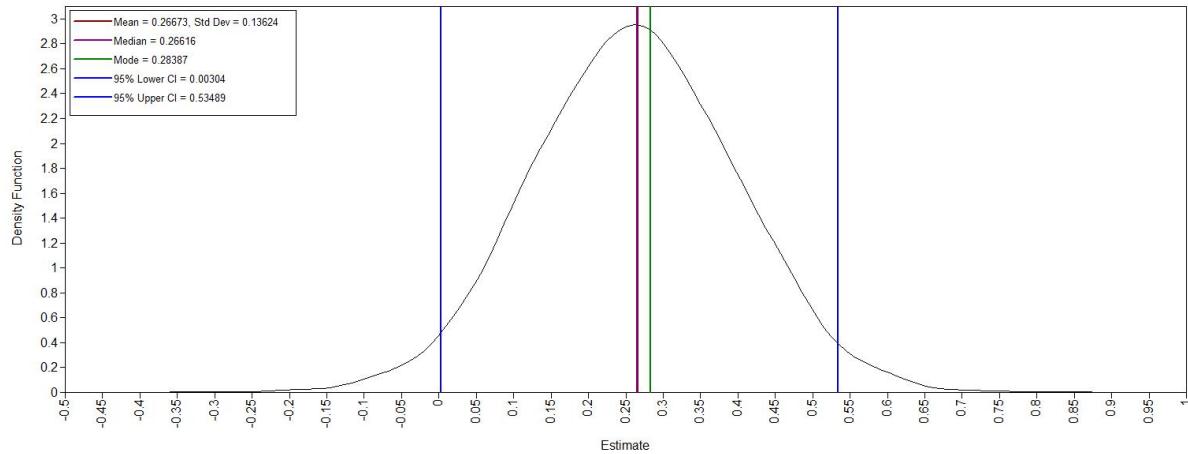


Figure S19

Posterior Distribution's Kernel Density Plot (MDS → BEH_W)

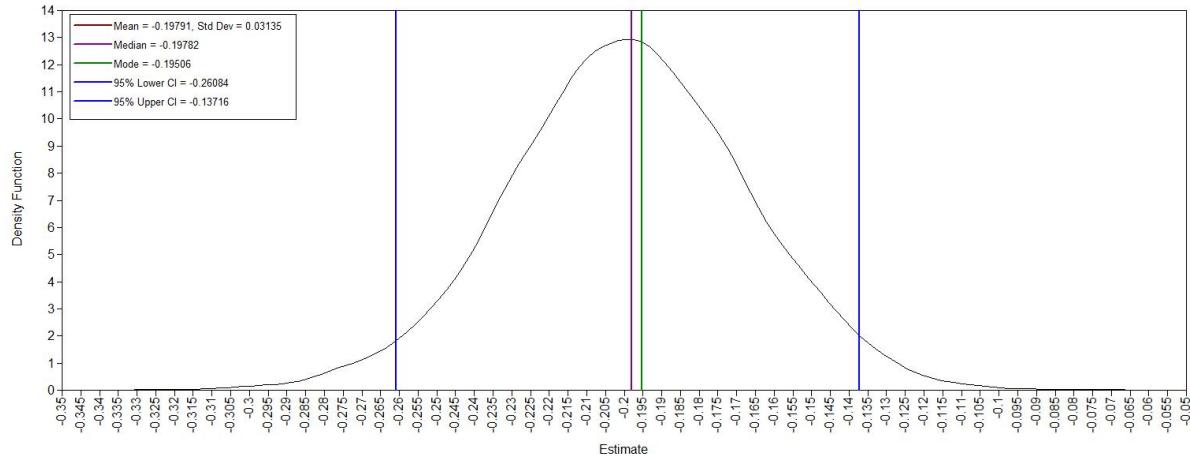


Figure S20

Posterior Distribution's Kernel Density Plot (MDS → BEH_NW)

